ERP and PDM Relationship in an IDE

Navy RIC Meeting

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Purpose

Discuss the relationship of Enterprise Resource Planning (ERP) and Product Data Management (PDM) operating in an Integrated Digital Environment (IDE)

Definitions

- **Integrated Digital Environment (IDE)**

A concept for the automation and integration of accurate information supporting the design, development, fielding, operation and sustainment of defense capabilities linked in a seamless manner to the authoritative source (Navy IDE CONOPS)

- **Product Data Management (PDM)**

The integration of product data and processes throughout the product's life cycle.

Definitions (cont'd)

- **Enterprise Resource Planning (ERP)**

Used to reengineer/modernize processes to achieve the best business practices. ERP systems use COTS software, built around application modules, to provide all the functions required to operate any organization

- **Integration**

PDM controls the product information in the database that feeds data into the ERP modules. The goal is seamless access between these systems such that data is

ERP/PDM Overview

- ERP and PDM are closely related yet very different technologies
- Each system has different ways of storing, accessing, exchanging and translating data
- Product structure is the primary link between ERP and PDM
- Integrating ERP and PDM is a difficult task that is well worth the effort due to the synergy

ERP Attributes

- Coordinates production operations for peak efficiency
- A major challenge in implementing ERP is to supply and input all the data required
- Works best in a no-change environment
- Relies on direct storage of information using relational databases
- Key use in Navy for improving

ERP Applications

- Process/workflow management
- Financial management
- Asset management
- Project management
- Logistics management
- Quality management

PDM Attributes

- Used to control information and work processes required to design, build and support products
- Designed to operate with constant changes resulting in increased flexibility
- Uses metadata technology – can be initiated with minimal information
- Manages product information and processes throughout life cycle
- Ensures right information is

PDM Applications

- Product information storage and retrieval
- Workflow and process management
- Product structure management
- Program management

Goals

- A single database with shared common data interoperable and integrated
- Information is created once and used many times throughout the enterprise
- Improved communication and cooperation at multiple levels
- Manage all product-related information and processes during the product's life cycle
- Standardized business processes combined with seamless information exchange
- Process improvements resulting in

Issues

- ERP and PDM have different perspectives of the same information
- ERP lacks the flexibility of PDM in tailoring to the needs of engineering
- Integration requires large time and resource investment
- Who controls data in the enterprise?
- How should control change over product life cycle?

Summary

- Integrating ERP and PDM is a difficult but necessary task
- Strong management commitment needed to make it work
- Communication and cooperation among diverse groups are keys to success
- Many vendors offer software products enabling multi-level integration
- Benefits far outweigh integration